Section 42 Groove and Grind Pavement

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4-4201 General

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Grooving is generally performed to increase the coefficient of friction for new or existing portland cement concrete or asphalt concrete pavement. It is one of the methods discussed in Section 611.8, "PCCP Rehabilitation Strategies," of the *Highway Design Manual*.

Grinding is generally performed to improve the riding quality of new or existing portland cement concrete or asphalt concrete pavement. Grinding may also retard structural damage at the joints of portland cement concrete pavement. Existing pavements are ground as a rehabilitation strategy. New pavements may be ground to meet smoothness requirements.

4-4202 Before Work Begins

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Review the contract plans and specifications. Also, take the following steps:

- Discuss traffic handling with the contractor and review the contractor's plan for lane closures. For a discussion of traffic handling devices and lane closure procedures, see Section 4-12, "Construction Area Traffic Control Devices," and Section 2-2, "Traffic," of the *Construction Manual* (manual).
- Before the grooving or grinding operation, inspect and locate any existing detector loops on either new or existing pavement to prevent damage to the detector loops' sealant. If detector loops are not visible, consult with the district traffic unit.
- Check local noise ordinances and review specified noise requirements.
- Before grinding, check adjacent pavement for proper drainage and smoothness.
- Verify that the required water pollution control plan is approved and in place.
- In areas to be grooved or ground, verify that yellow stripe and pavement markings do not contain lead. For instructions regarding this issue, See Section 4-15, "Existing Highway Facilities," of this manual.
- Review the project to ascertain all the requirements for handling traffic. Before permitting the contractor to begin work, require the submittal of the specified documents for allowing residue disposal outside the right-of-way.
- Ensure the contractor's equipment meets specified requirements.

4-4203 During the Course of Work

4-4203A The following applies to both grooving and grinding operations

- Observe the operation to ensure that equipment and noise levels comply with specifications.
- Ensure that the handling of residue and dust from the operation meets specifications.
- Ensure that the grooved or ground widths meet specifications.

4-4203B When grooving is specified

- At the beginning of the work shift, check behind the grooving machine to ensure that all the blades are cutting grooves to the specified depth.
- Record the locations of omitted grooves. When specified, require the cutting of omitted grooves.

4-4203C When grinding is specified

- As work progresses, check the ground pavements with the specified straightedge.
- Determine if any abnormally depressed areas must be excluded from testing with the profilograph and the 3.6 m straightedge. Measure these areas to ensure they do not exceed the specified percentage of the total ground area.
- In accordance with California Test 526, "Operation of California Profilograph and Evaluation of Profiles," measure ground portland cement concrete pavements for a profile index.
- Ensure ground areas on structures, approach slabs, and 15 m of approach pavement meet the smoothness and cover requirements in Section 51-1.17, "Finishing Bridge Decks," of the *Standard Specifications.*
- In accordance with California Test 342, "Surface Skid Resistance with the California Portable Skid Test," determine the coefficient of friction for surfaces that have been ground.

4-4204 Measurement and Payment

Measure both grooving and grinding by the area grooved or ground. As the work progresses, make transverse measurements to ensure the grooved or ground areas meet the widths specified. You may compute lengths by measuring the distance to start and stop locations from known stations and by computing the length grooved or ground from the stationing. Include curve corrections in the calculations.